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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,702	12/04/2003	Thomas B. Wilborn	030485	4003

23696 7590 10/19/2006

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EXAMINER

SAFAIPOUR, BOBBAK

ART UNIT PAPER NUMBER

2618

DATE MAILED: 10/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/730,702	Applicant(s) WILBORN ET AL.	
	Examiner Bobbak Safaipoor	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Applicant's claim for domestic priority under 35 U.S.C. 119(e) is acknowledged.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 1-11, 21-26, and 29-32** rejected under 35 U.S.C. 102(e) as being anticipated by **Schwarz et al (United States Patent Application Publication #2006/0111110 A1).**

Consider **claim 1**, Schwarz et al disclose the claimed invention wherein an apparatus operable to schedule measurement for cells in a plurality of wireless communication systems (paragraph 23), comprising:

a controller operative to categorize cells in a first wireless communication system based on a plurality of states, prioritize the plurality of states, prioritize cells in a second wireless communication system relative to the plurality of states, select a cell in the first system or the second system based on priorities of the cells in the first and second systems, and schedule the selected cell for measurement in next available frame (paragraph 69; The measured cells are ranked based on the measured quality of the serving cell and the measured quality of the neighbor cell, and the target cell is selected based on the ranking);

and a demodulator operative to make measurement for the selected cell in the next available frame (paragraph 70; At least one quality threshold of the serving cell is adjusted, and the quality of the serving cell is measured. Measurements on the neighbor cell are triggered based on the measured quality of the serving cell and the quality threshold of the serving cell, and the target cell is selected based on the triggered measurements).

Consider **claim 2**, and **as applied to claim 1 above**, Schwarz et al disclose the claimed invention wherein the controller is operative to update states of the cells in the first system based at least on measurement results obtained from prior frames (paragraph 70; At least one quality threshold of the serving cell is adjusted, and the quality of the serving cell is measured. Measurements on the neighbor cell are triggered based on the measured quality of the serving cell and the quality threshold of the serving cell, and the target cell is selected based on the triggered measurements).

Consider **claim 3**, and **as applied to claim 2 above**, Schwarz et al disclose the claimed invention wherein the controller is operative to update cells in the states of the cells in the first system are further based on information for number of failed attempts to acquire timing information, number of failed attempts to acquire cell identification, and elapsed time since last selection for measurement (figure 6; paragraphs 6, 7, and 57; At least one element of said control information is adjusted, before the control information is received, according to a predetermined time pattern, thus forming adjusted control information. Therefore, the cell change procedures are controlled based on said adjusted control information).

Consider **claim 4**, and **as applied to claim 1 above**, Schwarz et al disclose the claimed invention wherein the controller is further operative to rank cells in the first system with same

state, for each of the plurality of states, and to select a cell for measurement further based on the ranking of the cells in the first system (paragraph 69; The measured cells are ranked based on the measured quality of the serving cell and the measured quality of the neighbor cell, and the target cell is selected based on the ranking).

Consider **claim 5**, and as **applied to claim 1 above**, Schwarz et al disclose the claimed invention wherein the apparatus is implemented within a user equipment (wireless communication device) (paragraphs 6, 7, 9, 21, 23, 42).

Consider **claim 6**, and as **applied to claim 1 above**, Schwarz et al disclose the claimed invention wherein the first and second systems utilize different radio access technologies (RATs) (paragraph 21; The invention can be applied to a mobile communication system comprising more than one radio access technology to which the user equipment can be connected).

Consider **claim 7**, and as **applied to claim 1 above**, Schwarz et al disclose the claimed invention wherein the first system is a Global System for Mobile Communications (GSM) system and the second system is a Wideband Code Division Multiple Access (W-CDMA) system (paragraphs 21 and 23; The preferred embodiments use two radio systems, i.e. the GSM and UMTS, which belongs to the third generation and is implemented by WCDMA technology).

Consider **claim 8**, Schwarz et al disclose a method of scheduling measurement for cells in a plurality of wireless communication systems, comprising: categorizing cells in a first wireless communication system based on a plurality of states; prioritizing the plurality of states; prioritizing cells in a second wireless communication system relative to the plurality of states; selecting a cell in the first system or the second system based on priorities of the cells in the first and second systems; and scheduling the selected cell for measurement in next available frame

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(paragraphs 69 and 70; The measured cells are ranked based on the measured quality of the serving cell and the measured quality of the neighbor cell, and the target cell is selected based on the ranking. At least one quality threshold of the serving cell is adjusted, and the quality of the serving cell is measured. Measurements on the neighbor cell are triggered based on the measured quality of the serving cell and the quality threshold of the serving cell, and the target cell is selected based on the triggered measurements).

Consider **claim 9**, and **as applied to claim 8 above**, Schwarz et al disclose the claimed invention wherein the first system is a Global System for Mobile Communications (GSM) system and the second system is a Wideband Code Division Multiple Access (W-CDMA) system (paragraphs 21 and 23; The preferred embodiments use two radio systems, i.e. the GSM and UMTS, which belongs to the third generation and is implemented by WCDMA technology).

Consider **claim 10**, and **as applied to claim 8 above**, Schwarz et al disclose the claimed invention wherein cells in the second system are periodically scheduled for measurement (paragraph 62; The time pattern is periodic and repeated. The control information for controlling the cell change procedures can be periodic responding to the time element-specific requirements of the mobile communication system).

Consider **claim 11**, and **as applied to claim 8 above**, Schwarz et al disclose the claimed invention wherein updating states of the cells in the first system based at least on measurement results obtained from prior frames (paragraph 70; Measurements on the neighbor cell are triggered based on the measured quality of the serving cell and the quality threshold of the serving cell, and the target cell is selected based on the triggered measurements).

Consider **claim 21**, and as **applied to claim 8 above**, Schwarz et al disclose the claimed invention wherein the cells in the second system are given higher priority than the cells in the first system if a designated flag is set (paragraph 99; Indicates certain situations when intra- and inter-frequency and inter-radio access technology measurements are triggered on cells with a higher priority with the serving cell).

Consider **claim 22**, and as **applied to claim 21 above**, Schwarz et al disclose the claimed invention wherein ranking cells in the first system with same state, for each of the plurality of states, and wherein the selecting is further based on the ranking of the cells in the first system (paragraph 69; The measured cells are ranked based on the measured quality of the serving cell and the measured quality of the neighbor cell, and the target cell is selected based on the ranking).

Consider **claim 23**, and as **applied to claim 22 above**, Schwarz et al disclose the claimed invention wherein a highest-ranking cell with highest priority is selected for measurement in the next available frame (paragraph 69; The measured cells are ranked based on the measured quality of the serving cell and the measured quality of the neighbor cell, and the target cell is selected based on the ranking).

Consider **claim 24**, and as **applied to claim 23 above**, Schwarz et al disclose the claimed invention wherein highest-ranking cell with the highest priority is selected for measurement only if a frame that is used to make the measurement for the cell is potentially aligned with the next available frame (paragraphs 69 and 70; The measured cells are ranked based on the measured quality of the serving cell and the measured quality of the neighbor cell, and the target cell is selected based on the ranking. At least one quality threshold of the serving cell is adjusted, and

the quality of the serving cell is measured. Measurements on the neighbor cell are triggered based on the measured quality of the serving cell and the quality threshold of the serving cell, and the target cell is selected based on the triggered measurements).

Consider **claim 25**, and as **applied to claim 22 above**, Schwarz et al disclose the claimed invention wherein the cells in the first system with the same state are ranked based on received signal strength (paragraph 83; The user equipment shall be capable of tuning to the neighbor carriers, from which the suitable cell is selected. Tuning involved detecting and synchronizing the user equipment to the neighbor carriers. The user equipment searches all radio frequency channels within its bands of operation, take readings of received radio frequency signal levels on each channel, and calculate the signal levels for each).

Consider **claim 26**, and as **applied to claim 22 above**, Schwarz et al disclose the claimed invention wherein the cells in the first system with the same state are ranked based on elapsed time since last measurement (figure 6; paragraphs 6, 7, and 57; At least one element of said control information is adjusted, before the control information is received, according to a predetermined time pattern, thus forming adjusted control information. Therefore, the cell change procedures are controlled based on said adjusted control information).

Consider **claim 29**, Schwarz et al disclose an apparatus operable to schedule measurement for cells in a plurality of wireless communication systems, comprising: means for categorizing cells in a first wireless communication system based on a plurality of states; means for prioritizing the plurality of states; means for prioritizing cells in a second wireless communication system relative to the plurality of states; means for selecting a cell in the first system or the second system based on priorities of the cells in the first and second systems; and

means for scheduling the selected cell for measurement in next available frame (paragraphs 69 and 70; The measured cells are ranked based on the measured quality of the serving cell and the measured quality of the neighbor cell, and the target cell is selected based on the ranking. At least one quality threshold of the serving cell is adjusted, and the quality of the serving cell is measured. Measurements on the neighbor cell are triggered based on the measured quality of the serving cell and the quality threshold of the serving cell, and the target cell is selected based on the triggered measurements).

Consider **claim 30**, and as applied to **claim 29 above**, Schwarz et al disclose the claimed invention wherein the apparatus further comprises means for updating states of the cells in the first system based at least on measurement results obtained from prior frames (paragraph 70; Measurements on the neighbor cell are triggered based on the measured quality of the serving cell and the quality threshold of the serving cell, and the target cell is selected based on the triggered measurements).

Consider **claim 31**, and as applied to **claim 29 above**, Schwarz et al disclose the claimed invention wherein the apparatus further comprises means for ranking cells in the first system with same state, for each of the plurality of states, and wherein a cell in the first system or the second system is selected further based on the ranking of the cells in the first system (paragraph 69; The measured cells are ranked based on the measured quality of the serving cell and the measured quality of the neighbor cell, and the target cell is selected based on the ranking).

Consider **claim 32**, Schwarz et al disclose a processor readable media for storing instructions operable in a wireless device to: categorize cells in a first wireless communication system based on a plurality of states; prioritize the plurality of states; prioritize cells in a second

wireless communication system relative to the plurality of states; select a cell in the first system or the second system based on priorities of the cells in the first and second systems; and schedule the selected cell for measurement in next available frame (paragraphs 69 and 70; The measured cells are ranked based on the measured quality of the serving cell and the measured quality of the neighbor cell, and the target cell is selected based on the ranking. At least one quality threshold of the serving cell is adjusted, and the quality of the serving cell is measured. Measurements on the neighbor cell are triggered based on the measured quality of the serving cell and the quality threshold of the serving cell, and the target cell is selected based on the triggered measurements).

Allowable Subject Matter

4. **Claims 12-20 and 27-28** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Consider **12**, and as **applied to claim 8 above**, the best prior art of record found during the examination of the present application, **Schwarz et al (United States Patent Application Publication #2006/0111110 A1)**, fail to specifically disclose, teach, or suggest wherein the plurality of states include an Unknown state, a Known Confirmed state, and a Known Unconfirmed state, the Unknown state including cells in the first system for which timing information and cell identification are not known, the Known Confirmed state including cells in the first system for which timing information is known and cell identification has been confirmed

within last T seconds, where T is a predetermined time period, and the Known Unconfirmed state including cells in the first system for which timing information is known and cell identification has not been confirmed within last T seconds.

However, Schwarz et al only disclose that at least one element of said control information is adjusted, before the control information is received, according to a predetermined time pattern, thus forming adjusted control information. Therefore, the cell change procedures are controlled based on said adjusted control information.

Claims 13-20 and 27-28 are allowable because it is dependent upon claim 12.

Conclusion

6. (U.S. Patent # 6,308,066 B1) discloses a **Method to determine neighbor cell data in a mobile cellular system and a mobile station.**

(U.S. Patent # 6,963,745 B2) discloses a **Method for performing inter system handovers in mobile telecommunication system.**

(U.S. Patent # 6,725,039 B1) discloses a **Mobile telecommunications system.**

(U.S. Patent Application Publication # 2003/0119550 A1) discloses an **Intersystem Handover.**

(U.S. Patent Application Publication # 2003/0114158 A1) discloses an **Intersystem handover of a mobile terminal.**

(U.S. Patent Application Publication # 2004/0029587 A1) discloses a **Method for supporting a handover between radio access networks.**

7. Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

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Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Bobbak Safaipour whose telephone number is (571) 270-1092. The Examiner can normally be reached on Monday-Friday from 9:00am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Edan Orgad can be reached on (571) 272-7884. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

Bobbak Safaipour
B.S./bs

October 10, 2006

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PATENT EXAMINER/TELECOMM.

Edan Orgad 10/11/06